

# PRODUCT INFORMATION



## Ras Inhibitory Peptide

Item No. 17474

CAS Registry No.: 159088-48-9

Synonym: Sos SH3 Domain Inhibitor

MF:  $C_{53}H_{91}N_{19}O_{11}$

FW: 1,170.4

Purity:  $\geq 95\%$

Supplied as: A crystalline solid

Storage:  $-20^{\circ}\text{C}$

Stability:  $\geq 4$  years

H—Val—Pro—Pro—Pro—Val—Pro—Pro—Arg—Arg—Arg—OH

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Ras inhibitory peptide is supplied as a crystalline solid. A stock solution may be made by dissolving the Ras inhibitory peptide in the solvent of choice, which should be purged with an inert gas. Ras inhibitory peptide is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of Ras inhibitory peptide in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of Ras inhibitory peptide can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of Ras inhibitory peptide in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Son of sevenless homolog 1 (Sos1) is a guanine nucleotide exchange factor (GEF) that directs the exchange of Ras-GDP to Ras-GTP by binding to SH3 domains of the growth factor receptor-bound protein 2 (Grb2), leading to the activation of ERK. Ras inhibitory peptide is a synthetic peptide that contains the sequence PVPPR, which corresponds to a region within human Sos1 that interacts with an SH3 domain of Grb2.<sup>1</sup> It specifically blocks the interaction of the GEF with Grb2, preventing an interaction that is essential for Ras activation by receptor tyrosine kinases, including epidermal growth factor receptor.<sup>1</sup>

### Reference

1. Li, N., Batzer, A., Daly, R., *et al.* Guanine-nucleotide-releasing factor hSos1 binds to Grb2 and links receptor tyrosine kinases to Ras signalling. *Nature* **363**, 85-88 (1993).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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